

**Notice of Determination
General State Operating Permit for the
Application of Contact Aquatic Herbicides**

Permit No. SOPHA0000

December 11, 2003

I. Background

Aquatic herbicide application refers to spraying nuisance aquatic plants with chemicals to kill, inhibit and reduce plant growth and provide for potential long-term control of such plants. In Tennessee, nuisance and noxious weed growth primarily occurs in Corps of Engineers and Tennessee Valley Authority (TVA) reservoirs, but can also occur in smaller impoundments. Most herbicides are organic chemical mixtures. Contact herbicides are fast-acting, thus killing quickly and then dissipating. Systemic herbicides work more slowly and may remain unchanged in the water column for a longer period of time. Chelated copper compounds are sometimes used in conjunction with organic chemical mixtures to increase effectiveness of weeds control.

The Tennessee Department of Environment and Conservation, Division of Water Pollution Control (the division) has regulated the control of nuisance aquatic plants growth for more than ten years. The division issued a General State Operating Permit (SOP) which authorized owner/operators or certified persons to apply contact herbicides to waters of the state that are contained within federal and state managed impoundments and lakes, provided the activities are in compliance with the terms of the permit. This SOP expired on November 30, 2002.

Based on the Ninth Circuit Court ruling in *Headwaters, Inc vs Talent Irrigation District* case that herbicide application required a National Pollutant Discharge Elimination System (NPDES) permit, the division prepared a draft NPDES general permit for application of contact aquatic herbicides. This general permit was placed on public notice dated May 26, 2003. Subsequently, the division held a series of public hearings across the state between June 23, 2003 and June 26, 2003. During the comment period that closed on July 11, 2004, the division received a number of oral and written comments, which are summarized below in Section II.

II. Comments and responses to comments

Comment: NPDES vs. SOP

Most commenters requested that a State Operating Permit instead of an NPDES permit be issued. These commenters suggested that with the Federal

Insecticide, Fungicide, and Rodenticide Act ([FIFRA](#)) and the Tennessee Water Quality Control Act of 1977 ([T.C.A. 69-3-101](#) et seq.) provide a better administrative tool than an NPDES permit to protect the waters of the state. In response to a request by the U. S. Court of Appeals for the Second Circuit in *Altman v. Town of Amherst*, EPA issued a July 11, 2003, memorandum that advises that the application of aquatic herbicides is not subject to NPDES permitting requirements.

Another commenter urged the division to withdraw this General NPDES Permit.

Response: The division has agreed to change the subject draft permit from a general NPDES permit to a general State Operating Permit.

Comment: Contact, Systemic and/or Copper-based Herbicides

TVA expressed the opinion, that under various conditions (including but not limited to type of weeds or grasses, water flow conditions, safety and/or economical considerations) different types of contact, copper-based or systemic herbicides, or combination of herbicides are appropriate for use in the waters of the state. The paper titled *Copper Issues/Questions Use of Copper Formulations as Herbicides/Algicides in Aquatic Systems* by Dr. John H. Rodger, Jr. was submitted that supported the idea that the quality of the water is not adversely affected by the proper use of copper-based herbicides. This paper, in a question and answer format, addresses technical concerns including relative effectiveness, human health effects, toxicity, environmental impact and bioaccumulation with a comprehensive list of published literature and experts. Furthermore, this material suggests that the addition of a small amount of copper booster herbicide in combination with a contact herbicide may significantly reduce the required amount of the contact herbicide.

TVA also requested that systemic herbicides be allowed for use on emergent species in shoreline and swimming areas.

One commenter asked that toxics chemicals not be put into the waters of the state.

Additionally, another commenter suggested that changing the herbicide regime every two or three years would be more protective by reducing the accumulation residual chemicals in the sediment.

Finally, the Tennessee Wildlife Resources Agency requested that the permit only authorize contact herbicides and that copper-based enhancers not be authorized until a comprehensive evaluation is done.

Response: At this time, the division will proceed with the issuance of this State Operating Permit authorizing application of contact aquatic herbicides only. The permit will also require that the herbicide regime be varied every two or three years to prevent residual accumulation in the lake/reservoir beds.

The division finds merit in TVA's comments, as well as those of independent researchers, that suggest that limited use of systemic and copper boosters herbicides, in addition to contact aquatic herbicides, can be used and still be protective of the waters of the state. According to FIFRA, federally approved systemic and copper-based herbicides, when applied according to label directions, should not adversely affect fish and aquatic life. However, in order to facilitate issuance of this permit, the division will proceed without the allowance of systemic or copper-based herbicides. The division intends to consider modification of this permit to allow limited use of systemic and copper-based herbicides in waters of the state that are contained within federal and state managed impoundments and lakes. The division believes that it would be inappropriate to include systemic and copper-based herbicides without more specific public discourse on the matter. For that reason, the division intends to schedule the permit modification process so as to have the final decision in place before summer 2004.

Comment: Notice of Coverage

The applicant should be allowed to proceed with herbicide application 30 days after submission, via certified mail, a completed NOI unless notified otherwise by TDEC.

Response: The division has reviewed sections 2, 3 and 4 of the draft permit and is revising the permit provisions related to obtaining a NOC as follows:

"The division will transmit to the permittee a Notice of Coverage (NOC) under this permit, which shall specify the effective date of coverage. The term of coverage shall not end later than the expiration date of this state operating permit. If the division has not transmitted an NOC to a permittee within 30 days of receipt of the NOI, discharges will be authorized 30 days after submission of a completed NOI, via certified mail, unless otherwise notified by TDEC."

Comment: Cultural, Historical or Archaeological Sites

Condition 1.5.5. of the proposed general permit prohibits the application of contact herbicides that are likely to have an adverse impact on cultural, historical or archaeological features or sites. This condition would apply to any historic or archaeological property regardless of the status of the property vis-à-vis its eligibility for placement on the National Register of Historic Places (NRHP). Previous general NPDES permits issued by Tennessee have limited the applicability of this provision to only those historic properties that are listed or eligible for listing on the NRHP. We request Tennessee to revise this provision to make it conform to the language in other general NPDES permits.

Response: The division has revised section 1.5.5. as follows:

"This permit does not authorize the application of contact herbicides or related activities that would adversely impact cultural, historic or archaeological

properties that are listed or eligible for listing in the National Register of Historic Places maintained by the Secretary of the U.S. Department of Interior.”

Comment: Impaired Streams

The draft permit language fails to make a connection between a substance in the sprayed herbicide and the pollutant for which the stream is impaired. We suggest that the language be revised to make clear this connection.

Response: In an effort to prevent further degradation to the waters of the state by use of contact herbicides the SOPHA shall be revised as follows:

This permit does not authorize the application of contact or systemic herbicides (or application-related activities) that introduce the same substances for which the waters are impaired.

Comment: One commenter suggested reinforcing the following label instructions including state and federal pesticide regulations (record keeping and reporting), additional water use restrictions and all other administrative requirements.

Response: All of these issues will be incorporated into the permit.

Comment: Definitions

It was stated in the public meetings that “water intakes” refer to potable water intakes only. We suggest the addition of the word “potable”.

Does “operator” refer to the permittee, applicator, or someone else?

Response: “Potable” will be replaced with the word “all” in the permit.

“Applicator” will be replaced for the word “operator” in the permit.

Comment: Sign Placement

TVA suggested posting an 8.5“ x 11.0” sign with letters smaller than 0.5” at the end of each dock or pier with another sign posted along the shoreline facing dwellings and facilities to effectively alert the public to the use of herbicides.

Response: The division has decided that the signs should be a minimum of 1’ x 1’ with 0.5” letters. The permittee shall place and maintain one sign per every acre of the affected area. A minimum of two signs shall be placed, regardless of the size of the proposed herbicide application area.

Comment: EPA suggested that Tennessee Department of Agriculture be acknowledged as regulatory agency for pesticides on the signs.

Response: The verbiage of the signs will be changed accordingly.

Comment: Notice of Termination (NOT)

TVA suggested that the date of receipt of the NOT by the EAC be recognized as the date used to calculate the annual permit fee.

Response: The provision in the draft permit is consistent with the fee rule and will remain in the final permit.

Comment: Individual Coverage Notification

Amend individual coverage notification as stated in condition 3.3.2.1 for threatened and endangered species to be consistent with language in condition 7.17 for individual or alternative general permit coverage notification.

Response: The language found in condition 3.3.2.1 of the draft is as the division intended and will remain as is in the final permit.


Comment: Reporting

The permit failed to recognize that the application of aquatic herbicides that are registered under the Federal Insecticide, Fungicide, and Rodenticide Act of 1947 (FIFRA) are exempted from SWA and CERCLA reporting requirements regardless of the quantity released into the water so long as the spraying is conducted in accordance with label directions. Accordingly, TVA requested that the state require such reporting only when the herbicide application is not conducted in accordance with label directions.

Response: The division agrees and will modify the final permit accordingly.

The division's determination is to issue SOPHA0000 consistent with the above stated responses to comments.

Date: 12/11/03


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